### **PHE427**

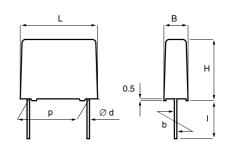
- Double metallized film pulse capacitor, polypropylene dielectric
- According to IEC 60384-17 Grade 1.1

#### TYPICAL APPLICATIONS

## CONSTRUCTION

High frequency applications with high current stress, such as deflection circuits in TV-sets, protection circuits in SMPS and in electronic ballasts.

Polypropylene dielectric with double metallized polyester film as electrodes. Encapsulation in self-extinguishing material meeting the requirements of UL 94V-0.



	TECHNICAL DATA												
Rated voltage $U_R$ , VDC Rated voltage $U_R$ , VAC Capacitance range, $\mu F$	160 100 0.047– 6.8	250 160 0.00068– 4.7	400 220 0.00068– 2.2	630 300 0.00068– 1.2	1000 375 0.00068– 0.0082								
Capacitance values	In accordance with IEC E12 series.												
Capacitance tolerance	±5% standard. Other tolerances on request												
Category temperature range	-55° C to +105° C												
Rated temperature	+85° C			0,5									

р	d	std I	max I	b
$7.5 \pm 0.4$ $10.0 \pm 0.4$ $15.0 \pm 0.4$ $22.5 \pm 0.4$ $27.5 \pm 0.4$ $37.5 \pm 0.5$	0.6 0.6 0.8 0.8 0.8 1.0	5 <sup>-1</sup> 5 <sup>-1</sup> 6 <sup>-1</sup> 6 <sup>-1</sup> 6 <sup>-1</sup>	30 30 30 30 30 30	± 0.4 ± 0.4 ± 0.4 ± 0.4 ± 0.4 ± 0.7

Voltage derating

The rated voltage is decreased with 1.3% / ° C

between +85° C and +105° C

Climatic category 55/105/56

Insulation resistance

Measured at 23° C, 100 VDC 60s for U<sub>R</sub> < 500 VDC

and at 500 VDC for  $U_{\scriptscriptstyle R}$  500 VDC

Between terminals:

 $C \leq 0.33~\mu F: \geq 100~000~M\Omega$   $C > 0.33~\mu F: \geq 30~000~s$  Between terminals and case:

 $\geq 100~000~M\Omega$ 

Dissipation factor tanδ

Maximum values at 23°C

	C ≤ 0.1 μF	0.1 μF < C ≤ 1.0 μF	C > 1.0 μF
1 kHz	0.03 %	0.03 %	0.03 %
10 kHz	0.04 %	0.06 %	_
100 kHz	0.15 %	_	_

Inductance Approximately 6 nH/cm for the total length of capacitor

winding and the leads.

Pulse rise time The capacitors can withstand an unlimited number of pulses

with a dU/dt according to the article table. For peak to peak voltages lower than the rated voltage ( $U_{\rm pp} < U_{\rm p}$ ), the specified

dU/dt can be multiplied by  $U_R/U_{PP}$ .

### **ENVIRONMENTAL TEST DATA**

Vibration According to IEC 60068-2-6 test Fc. 10–500 Hz for lead space

 $\leq$  22.5 mm,10–55 Hz for lead space  $\geq$  27.5 mm. 6 h with 0.75 mm amplitude or 98 m/s² (depending on frequency) with the capacitor mounted on PCB with the supporting

area in contact with the PCB.

Climatic sequence According to IEC 60384-1.

**Bump** According to IEC 60068-2-29 test Eb. 4000 bumps at 390 m/s<sup>2</sup>

with the capacitor mounted on PCB with the supporting

area in contact with the PCB.

**Humidity** According to IEC 60068-2-3 test Ca, severity 56 days.



Capaci- tance µF	May											
μF	IVIAX	dimen	sions ii	n mm	Quanti	ty per ¡	package		Weight	Max dU/dt	Rthha °C/W 85 °C	Article code
	В	Н	L	р	Bulk	Tray	Reel	Ammo	g	V/µs	0.2 m/s	
							160	VDC/100 \	/AC			
							LEAD S	PACING 1	0 MM			
0.047	5.0	11.0	13.0	10.0	800		700		1.0	400	116	PHE427FA5470JR05
0.056	5.0	11.0	13.0	10.0	800		700		1.0	400	116	PHE427FA5560JR05
0.068	5.0	11.0	13.0	10.0	800		700		1.0	400	115	PHE427FA5680JR05
							LEAD S	SPACING 1	5 MM			
0.082	5.5	10.5	18.0	15.0	1000		600		1.5	200	100	PHE427FB5820JR06
0.10	5.5	10.5	18.0	15.0	1000		600		1.5	200	98	PHE427FB6100JR06
0.12	5.5	12.5	18.0	15.0	1000		600		1.7	200	85	PHE427FB6120JR06
0.15	6.5	12.5	18.0	15.0	1000		500		2.0	200	82	PHE427FB6150JR06
0.18	7.5	14.5	18.0	15.0	800		400		2.7	200	74	PHE427FB6180JR06
0.22	7.5	14.5	18.0	15.0	800		400		2.7	200	72	PHE427FB6220JR06
0.27	8.5	16.0	18.0	15.0	600		400		3.4	200	65	PHE427FB6270JR06
0.33	8.5	16.0	18.0	15.0	600		400		3.4	200	64	PHE427FB6330JR06
							LEAD S	PACING 22	2.5 MM			
0.22	6.5	14.5	26.0	22.5		234			3.2	100	58	PHE427FD6220JR06L
0.27	7.0	16.5	26.0	22.5		216			3.9	100	53	PHE427FD6270JR06L
0.33	7.0	16.5	26.0	22.5		216			3.9	100	52	PHE427FD6330JR06L
0.39	8.0	16.0	26.0	22.5		186			4.3	100	52	PHE427FD6390JR06L
0.47	8.0	16.0	26.0	22.5		186			4.3	100	52	PHE427FD6470JR06L
0.56	9.0	18.5	26.0	22.5		168		75	5.6	100	46	PHE427FD6560JR06L
0.68	9.0	18.5	26.0	22.5		168		760	5.6	100	46	PHE427FD6680JR06L
0.82	11.0	21.5	26.0	22.5		253	4	0	8.0	100	40	PHE427FD6820JR06L
1.0	11.0	21.5	26.0	22.5		253	la.		8.0	100	39	PHE427FD7100JR06L
								D4 OINIO 6				
							LEAD S	PACING 27				
1.0	10.5	20.5	31.5	27.5		216			8.8	60	37	PHE427FF7100JR06L
1.2	11.5	22.5	31.5	27.5	XU.	198			10.6	60	34	PHE427FF7120JR06L
1.5	11.5	22.5	31.5	27.5		198			10.6	60	34	PHE427FF7150JR06L
1.8	17.5	28.0	31.5	27.5		126			19.7	60	28	PHE427FF7180JR06L
2.2	17.5	28.0	31.5	27.5		126			19.7	60	27	PHE427FF7220JR06L
							LEAD S	PACING 37	7.5 MM			
1.8	13.0	24.0	41.0	37.5		140			16.6	50	27	PHE427FR7180JR06L
2.2	15.0	26.0	41.0	37.5		119			20.8	50	26	PHE427FR7220JR06L
2.7	15.0	26.0	41.0	37.5		119			20.8	50	25	PHE427FR7270JR06L
3.3	15.0	26.0	41.0	37.5		119			20.8	50	25	PHE427FR7330JR06L
3.9	16.5	32.0	41.0	37.5		105			28.1	50	21	PHE427FR7390JR06L
4.7	16.5	32.0	41.0	37.5		105			28.1	50	20	PHE427FR7470JR06L
5.6	19.0	36.0	41.0	37.5		91			36.5	50	18	PHE427FR7560JR06L
6.8	19.0	36.0	41.0	37.5		91			36.5	50	18	PHE427FR7680JR06L
							250	VDC/160 \	/AC			
							LEAD S	SPACING 7	.5 MM			
0.00068	4.0	8.0	10.0	7.5	1000		1700	1900	0.5	800	160	PHE427HK3680JR05
0.00082	4.0	8.0	10.0	7.5	1000		1700	1900	0.5	800	160	PHE427HK3820JR05
0.0010	4.0	8.0	10.0	7.5	1000		1700	1900	0.5	800	160	PHE427HK4100JR05
0.0012	4.0	8.0	10.0	7.5	1000		1700	1900	0.5	800	160	PHE427HK4120JR05
0.0015	4.0	8.0	10.0	7.5	1000		1700	1900	0.5	800	160	PHE427HK4150JR05
0.0018	4.0	8.0	10.0	7.5	1000		1700	1900	0.5	800	160	PHE427HK4180JR05
0.0022	4.0	8.0	10.0	7.5	1000		1700	1900	0.5	800	160	PHE427HK4220JR05
0.0027	4.0	8.0	10.0	7.5	1000		1700	1900	0.5	800	160	PHE427HK4270JR05
0.0033	4.0	8.0	10.0	7.5	1000		1700	1900	0.5	800	160	PHE427HK4330JR05
0.0039	4.0	8.0	10.0	7.5	1000		1700	1900	0.5	800	160	PHE427HK4390JR05
0.0047	4.0	8.0	10.0	7.5	1000		1700	1900	0.5	800	160	PHE427HK4470JR05
0.0056	4.0	8.0	10.0	7.5	1000		1700	1900	0.5	800	160	PHE427HK4560JR05
0.0068	4.0	8.0	10.0	7.5	1000		1700	1900	0.5	800	160	PHE427HK4680JR05
0.0082	4.0	8.0	10.0	7.5	1000		1700	1900	0.5	800	160	PHE427HK4820JR05
	4.0	8.0	10.0	7.5	1000		1700	1900	0.5	800	160	PHE427HK5100JR05
0.010												



						AR	TICLE TA	BLE			
Capaci- tance	Max	dimen	sions i	n mm	Quantit	y per packa	ige	Weight	Max dU/dt	Rthha °C/W 85 °C	Article code
μF	В	н	L	р	Bulk	Tray Re	el Ammo	g	V/µs	0.2 m/s	
						2	50 VDC/160	VAC			
						LEA	D SPACING	7.5 MM			
0.012	4.0	8.0	10.0	7.5	1000	1700	1900	0.5	800	160	PHE427HK5120JR0
0.015	4.0	8.0	10.0	7.5	1000	1700		0.5	800	160	PHE427HK5150JR0
0.018	4.0	8.0	10.0	7.5	1000	1700		0.5	800	160	PHE427HK5180JR0
0.022	4.0	8.0	10.0	7.5	1000	1700		0.5	800	160	PHE427HK5220JR0
0.027	5.0	11.0	10.0	7.5	1000	1300		0.8	800	160	PHE427HK5270JR0
0.033	5.0	11.0	10.0	7.5	1000	1300		0.8	800	160	PHE427HK5330JR0
0.039	5.0	11.0	10.0	7.5	1000	1300		0.8	800	160	PHE427HK5390JR0
0.047	5.0	11.0	10.0	7.5	1000	1300		0.8	800	160	PHE427HK5470JR0
0.056	6.0	12.0	10.5	7.5	1000	1000		1.0	800	160	PHE427HK5560JR0
0.068	6.0	12.0	10.5	7.5	1000	1000	1200	1.0	800	160	PHE427HK5680JR0
						LEA	AD SPACING	i 10 MM			
0.015	4.0	9.0	13.0	10.0	1000	900		0.6	400	142	PHE427HA5150JR0
0.018	4.0	9.0	13.0	10.0	1000	900		0.6	400	142	PHE427HA5180JR0
0.022	4.0	9.0	13.0	10.0	1000	900		0.6	400	142	PHE427HA5220JR0
0.027	4.0	9.0	13.0	10.0	1000	900	)	0.6	400	139	PHE427HA5270JR0
0.033	4.5	10.5	13.0	10.0	1000	800	)	0.9	400	121	PHE427HA5330JR0
0.039	5.0	11.0	13.0	10.0	800	700	)	1.0	400	116	PHE427HA5390JR0
						LE/	AD SPACING	15 MM			
0.047	5.5	10.5	18.0	15.0	1000	600		1.5	600	100	PHE427HB5470JR0
0.056	5.5	10.5	18.0	15.0	1000	600		1.5	600	100	PHE427HB5560JR0
0.068	5.5	10.5	18.0	15.0	1000	600		1.5	600	98	PHE427HB5680JR0
0.082	5.5	12.5	18.0	15.0	1000	60		1.7	600	86	PHE427HB5820JR0
0.10	6.5	12.5	18.0	15.0	1000	500		2.0	600	83	PHE427HB6100JR0
).12	7.5	14.5	18.0	15.0	800	400		2.7	600	74	PHE427HB6120JR0
0.15	7.5	14.5	18.0	15.0	800	400		2.7	600	73	PHE427HB6150JR0
0.18	8.5	16.0	18.0	15.0	600	400		3.4	600	67	PHE427HB6180JR0
0.22	8.5	16.0	18.0	15.0	600	400		3.4	600	65	PHE427HB6220JR0
				(O		I EA	D SPACING	22 5 MM			
							DSPACING				D. 15 1051   D. 100   D.
).18	6.5	14.5	26.0	22.5		234		3.2	400	58	PHE427HD6180JR0
).22	7.0	16.5	26.0	22.5		216		3.9	400	53	PHE427HD6220JR0
).27	7.0	16.5	26.0	22.5		216		3.9	400	52	PHE427HD6270JR0
0.33	9.0	18.5	26.0	22.5		168		5.6	400	48	PHE427HD6330JR0
.39	9.0	18.5	26.0	22.5		168		5.6	400	46	PHE427HD6390JR0
0.47	9.0	18.5	26.0	22.5		168		5.6	400	46	PHE427HD6470JR0
	11.0	21.5	26.0	22.5		253 253		8.0 8.0	400	41 40	PHE427HD6560JR0
0.68	11.0	21.5	26.0	22.5		200		6.0	400	40	PHE427HD6680JR0
							D SPACING				
	10.5	20.5	31.5	27.5		216		8.0	300	38	PHE427HF6560JR00
	10.5	20.5	31.5	27.5		216		8.0	300	38	PHE427HF6680JR0
	11.5	22.5	31.5	27.5		198		10.6	300	34	PHE427HF6820JR0
	11.5	22.5	31.5	27.5		198		10.6	300	34	PHE427HF7100JR0
	14.5	24.5	31.5	27.5		153		14.5	300	31	PHE427HF7120JR0
	14.5	24.5	31.5	27.5		153		14.5	300	30	PHE427HF7150JR06
	17.5	28.0	31.5	27.5		126		19.7	300	27	PHE427HF7180JR06
2.2	17.5	28.0	31.5	27.5		126		19.7	300	26	PHE427HF7220JR06
						LEA	D SPACING	37.5 MM			
.5	13.0	24.0	41.0	37.5		140		16.6	200	27	PHE427HR7150JR0
	15.0	26.0	41.0	37.5		119		20.8	200	25	PHE427HR7180JR0
2.2	16.5	32.0	41.0	37.5		105		28.1	200	22	PHE427HR7220JR0
2.7	16.5	32.0	41.0	37.5		105		28.1	200	22	PHE427HR7270JR0
	16.5	32.0	41.0	37.5		105		28.1	200	20	PHE427HR7330JR0
	19.0	36.0	41.0	37.5		91		36.5	200	18	PHE427HR7390JR0
1.7	19.0	36.0	41.0	37.5		91		36.5	200	18	PHE427HR7470JR0



							ARTIC	CLE TABL	.E			
Capaci- tance	Max	dimen	sions ii	n mm	Quanti	ty per p	ackage		Weight	Max dU/dt	Rthha °C/W 85 °C	Article code
μF	В	Н	L	р	Bulk	Tray	Reel	Ammo	g	V/µs	0.2 m/s	
							400	VDC/220 V	AC			
							LEAD S	SPACING 7.	5 MM			
0.00068	4.0	8.0	10.0	7.5	1000		1700	1900	0.5	1200	160	PHE427KK3680JR05
0.00082	4.0	8.0	10.0	7.5	1000		1700	1900	0.5	1200	160	PHE427KK3820JR05
0.0010	4.0	8.0	10.0	7.5	1000		1700	1900	0.5	1200	160	PHE427KK4100JR05
0.0012	4.0	8.0	10.0	7.5	1000		1700	1900	0.5	1200	160	PHE427KK4120JR05
0.0015	4.0	8.0	10.0	7.5	1000		1700	1900	0.5	1200	160	PHE427KK4150JR05
0.0018	4.0	8.0	10.0	7.5	1000		1700	1900	0.5	1200	160	PHE427KK4180JR05
0.0022	4.0	8.0	10.0	7.5	1000		1700	1900	0.5	1200	160	PHE427KK4220JR05
0.0027	4.0	8.0	10.0	7.5	1000		1700	1900	0.5	1200	160	PHE427KK4270JR05
0.0027	4.0	8.0	10.0	7.5	1000		1700	1900	0.5	1200	160	PHE427KK42703R05
0.0039	4.0	8.0	10.0	7.5	1000		1700	1900	0.5	1200	160	PHE427KK4390JR05
0.0047	4.0	8.0	10.0	7.5	1000		1700	1900	0.5	1200	160	PHE427KK4470JR05
0.0056	4.0	8.0	10.0	7.5	1000		1700	1900	0.5	1200	160	PHE427KK4560JR05
0.0068	4.0	8.0	10.0	7.5	1000		1700	1900	0.5	1200	160	PHE427KK4680JR05
0.0082	4.0	8.0	10.0	7.5	1000		1700	1900	0.5	1200	160	PHE427KK4820JR05
0.010	4.0	8.0	10.0	7.5	1000		1700	1900	0.5	1200	160	PHE427KK5100JR05
0.012	4.0	8.0	10.0	7.5	1000		1700	1900	0.5	1200	160	PHE427KK5120JR05
0.015	5.0	11.0	10.0	7.5	1000		1300	1500	8.0	1200	160	PHE427KK5150JR05
0.018	5.0	11.0	10.0	7.5	1000		1300	1500	0.8	1200	160	PHE427KK5180JR05
0.022	5.0	11.0	10.0	7.5	1000		1300	1500	0.8	1200	160	PHE427KK5220JR05
0.027	5.0	11.0	10.0	7.5	1000		1300	1500	0.8	1200	160	PHE427KK5270JR05
0.033	5.0	11.0	10.0	7.5	1000		1300	1500	0.8	1200	160	PHE427KK5330JR05
0.039	6.0	12.0	10.5	7.5	1000		1000	1200	1.0	1200	160	PHE427KK5390JR05
0.047	6.0	12.0	10.5	7.5	1000		1000	1200	1.0	1200	160	PHE427KK5470JR05
0.047	0.0	12.0	10.5	7.5	1000		1000	1200	1.0	1200	100	FIIL421 NNJ41 0JN0J
							LEAD:	SPACING 10	MM			
0.0082	4.0	8.0	13.0	10.0	1000		900		0.6	600	142	PHE427KA4820JR05
0.010	4.0	9.0	13.0	10.0	1000		900		0.6	600	142	PHE427KA5100JR05
0.012	4.0	9.0	13.0	10.0	1000		900		0.6	600	142	PHE427KA51000H05
0.012	4.0	9.0	13.0	10.0	1000		900		0.0	600	142	PHE427KA5120JR05
0.018	4.5	10.5	13.0	10.0	1000		800		0.9	600	122	PHE427KA5180JR05
0.022	5.0	11.0	13.0	10.0	800		700		1.0	600	116	PHE427KA5220JR05
0.027	5.0	11.0	13.0	10.0	800		700		1.0	600	116	PHE427KA5270JR05
							LEAD :	SPACING 1	5 MM			
0.033	5.5	10.5	18.0	15.0	1000		600		1.5	1000	99	PHE427KB5330JR06
0.039	5.5	10.5	18.0	15.0	1000		600		1.5	1000	99	PHE427KB5390JR06
0.039	5.5	12.5	18.0	15.0	1000		600		1.7	1000	99	PHE427KB53903R06
0.056	6.5	12.5	18.0	15.0	1000		500		2.0	1000	86	PHE427KB5560JR06
0.068	6.5	12.5	18.0	15.0	1000		500		2.0	1000	83	PHE427KB5680JR06
0.082	7.5	14.5	18.0	15.0	800		400		2.7	1000	74	PHE427KB5820JR06
0.10	8.0	15.0	18.0	15.0	600		400		3.0	1000	71	PHE427KB6100JR06
0.12	8.5	16.0	18.0	15.0	600		400		3.4	1000	67	PHE427KB6120JR06
							LEAD S	PACING 22	.5 MM			
0.12	6.5	14.5	26.0	22.5		234			3.2	600	58	PHE427KD6120JR06
0.12	7.0	16.5	26.0	22.5		216			3.9	600	52	PHE427KD6120JR06
0.15 0.18	8.0	16.0	26.0			186			4.3	600	53	PHE427KD6180JR06
				22.5								
0.22	9.0	18.5	26.0	22.5		168			5.6	600	48	PHE427KD6220JR06
	10.5	19.0	26.0	22.5		264			6.7	600	45	PHE427KD6270JR06
	11.0	21.5	26.0	22.5		253			8.0	600	42	PHE427KD6330JR06
0.39	11.0	21.5	26.0	22.5		253			8.0	600	40	PHE427KD6390JR06
							LEAD S	PACING 27	.5 MM			
122 -	10 5	20 5	21 5	27 5			0			EOO	27	DUE/1071/E6000 ID00
	10.5	20.5	31.5	27.5		216			8.8	500	37	PHE427KF6330JR06
	10.5	20.5	31.5	27.5		216			8.8	500	37	PHE427KF6390JR06
	10.5	20.5	31.5	27.5		216			8.8	500	37	PHE427KF6470JR06
	11.5	22.5	31.5	27.5		198			10.6	500	34	PHE427KF6560JR06
0.68	14.5	24.5	31.5	27.5		153			14.5	500	32	PHE427KF6680JR06
	14.5 17.5	24.5	31.5	27.5		153 126			19.7 19.7	500	28 27	PHE427KF6820JR06



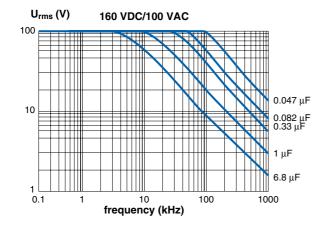
8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 11.0	10.0 10.0	7.5 37.5 37.5 37.5 37.5 37.5 37.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5	1000 1000 1000 1000 1000 1000 1000 100	140 119 105 105 91	630 °	Ammo VDC/220 V SPACING 3:  VDC/300 V SPACING 7  1900 1900 1900 1900 1900	7.5 MM  16.6 20.8 28.1 28.1 36.5  /AC  7.5 MM  0.5 0.5 0.5	Max dU/dt V/μs 300 300 300 300 300 300 300 300 300	Rthha °C/W 85 °C 0.2 m/s 27 25 22 21 19	PHE427KR7100JR06L2 PHE427KR7120JR06L2 PHE427KR7150JR06L2 PHE427KR7180JR06L2 PHE427KR7220JR06L2 PHE427MK3680JR05 PHE427MK3820JR05
24.0 26.0 32.0 32.0 36.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	37.5 37.5 37.5 37.5 37.5 37.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5	1000 1000 1000 1000 1000 1000 1000 100	140 119 105 105	400 LEAD S 630 LEAD S 1700 1700 1700 1700 1700	VDC/220 V SPACING 3 VDC/300 V SPACING 7 1900 1900 1900 1900	7.5 MM 16.6 20.8 28.1 28.1 36.5  /AC 7.5 MM 0.5 0.5 0.5	300 300 300 300 300 300 1400	27 25 22 21 19	PHE427KR7120JR06L: PHE427KR7150JR06L: PHE427KR7180JR06L: PHE427KR7220JR06L: PHE427KR7220JR06L: PHE427MK3680JR05 PHE427MK3820JR05
8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	10.0 10.0	37.5 37.5 37.5 37.5 37.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5	1000 1000 1000 1000 1000 1000 1000 100	119 105 105	630 LEAD S 1700 1700 1700 1700 1700	VDC/300 V SPACING 7 1900 1900 1900 1900	7.5 MM  16.6 20.8 28.1 28.1 36.5  /AC  7.5 MM  0.5 0.5 0.5	300 300 300 300 300	25 22 21 19 160 160	PHE427KR7120JR06L PHE427KR7150JR06L PHE427KR7180JR06L PHE427KR7220JR06L PHE427KR7220JR06L PHE427MK3680JR05 PHE427MK3820JR05
8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	10.0 10.0	37.5 37.5 37.5 37.5 37.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5	1000 1000 1000 1000 1000 1000 1000 100	119 105 105	630 LEAD : 1700 1700 1700 1700 1700	VDC/300 V SPACING 7 1900 1900 1900 1900	16.6 20.8 28.1 28.1 36.5 //AC	300 300 300 300 300	25 22 21 19 160 160	PHE427KR7120JR06L: PHE427KR7150JR06L: PHE427KR7180JR06L: PHE427KR7220JR06L: PHE427KR7220JR06L: PHE427MK3680JR05 PHE427MK3820JR05
8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	10.0 10.0	37.5 37.5 37.5 37.5 37.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5	1000 1000 1000 1000 1000 1000 1000 100	119 105 105	1700 1700 1700 1700 1700 1700	1900 1900 1900 1900 1900	20.8 28.1 28.1 36.5 /AC 7.5 MM 0.5 0.5 0.5	300 300 300 300 300	25 22 21 19 160 160	PHE427KR7120JR06L PHE427KR7150JR06L PHE427KR7180JR06L PHE427KR7220JR06L PHE427KR7220JR06L PHE427MK3680JR05 PHE427MK3820JR05
8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	10.0 10.0	37.5 37.5 37.5 37.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5	1000 1000 1000 1000 1000 1000 1000 100	105 105	1700 1700 1700 1700 1700 1700	1900 1900 1900 1900 1900	28.1 28.1 36.5 /AC 7.5 MM 0.5 0.5 0.5	300 300 300 300	22 21 19 160 160	PHE427KR7150JR06L PHE427KR7180JR06L PHE427KR7220JR06L PHE427KR7220JR06L PHE427MK3680JR05 PHE427MK3820JR05
8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5	1000 1000 1000 1000 1000 1000 1000 100	105	1700 1700 1700 1700 1700 1700	1900 1900 1900 1900 1900	28.1 36.5 /AC 7.5 MM 0.5 0.5 0.5	300 300 1400 1400	21 19 160 160	PHE427KR7180JR06L PHE427KR7220JR06L PHE427MK3680JR05 PHE427MK3820JR05
8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5	1000 1000 1000 1000 1000 1000 1000 100		1700 1700 1700 1700 1700 1700	1900 1900 1900 1900 1900	36.5 /AC 7.5 MM 0.5 0.5 0.5	1400 1400	19 160 160	PHE427KR7220JR06L PHE427MK3680JR05 PHE427MK3820JR05
8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5	1000 1000 1000 1000 1000 1000 1000 100		1700 1700 1700 1700 1700 1700	1900 1900 1900 1900 1900	/AC 7.5 MM 0.5 0.5 0.5	1400 1400	160 160	PHE427MK3680JR05 PHE427MK3820JR05
8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5	1000 1000 1000 1000 1000 1000 1000 100		1700 1700 1700 1700 1700 1700	1900 1900 1900 1900 1900	0.5 0.5 0.5 0.5	1400	160	PHE427MK3820JR05
8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5	1000 1000 1000 1000 1000 1000 1000 100		1700 1700 1700 1700 1700	1900 1900 1900 1900	0.5 0.5 0.5	1400	160	PHE427MK3820JR05
8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5	1000 1000 1000 1000 1000 1000 1000 100		1700 1700 1700 1700	1900 1900 1900	0.5 0.5	1400	160	PHE427MK3820JR05
8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5	1000 1000 1000 1000 1000 1000 1000 100		1700 1700 1700 1700	1900 1900 1900	0.5 0.5	1400	160	PHE427MK3820JR05
8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5	1000 1000 1000 1000 1000 1000		1700 1700 1700	1900 1900	0.5			
8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	7.5 7.5 7.5 7.5 7.5 7.5 7.5	1000 1000 1000 1000 1000 1000		1700 1700	1900				PHE427MK4100JR05
8.0 8.0 8.0 8.0 8.0 8.0 8.0	10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	7.5 7.5 7.5 7.5 7.5 7.5	1000 1000 1000 1000 1000		1700		0.5	1400	160	PHE427MK4120JR05
8.0 8.0 8.0 8.0 8.0 8.0 8.0	10.0 10.0 10.0 10.0 10.0 10.0 10.0	7.5 7.5 7.5 7.5 7.5	1000 1000 1000 1000			1300	0.5	1400	160	PHE427MK4150JR05
8.0 8.0 8.0 8.0 8.0 8.0	10.0 10.0 10.0 10.0 10.0 10.0	7.5 7.5 7.5 7.5	1000 1000 1000		1700	1900	0.5	1400	160	PHE427MK4180JR05
8.0 8.0 8.0 8.0 8.0	10.0 10.0 10.0 10.0 10.0	7.5 7.5 7.5	1000 1000		1700	1900	0.5	1400	160	PHE427MK4220JR05
8.0 8.0 8.0 8.0 11.0	10.0 10.0 10.0	7.5 7.5	1000		1700	1900	0.5	1400	160	PHE427MK4270JR05
8.0 8.0 8.0 11.0	10.0	7.5			1700	1900	0.5	1400	160	PHE427MK4330JR05
8.0 8.0 11.0	10.0		1000		1700	1900	0.5	1400	160	PHE427MK4390JR05
8.0 11.0			1000 1000			1900				
11.0	10.0				1700		0.5	1400	160	PHE427MK4470JR05
		7.5	1000		1700	1900	0.5	1400	160	PHE427MK4560JR05
440		7.5	1000		1300	1500	0.8	1400	160	PHE427MK4680JR05
11.0		7.5	1000		1300	1500	0.8	1400	160	PHE427MK4820JR05
11.0		7.5	1000		1300	1500	0.8	1400	160	PHE427MK5100JR05
12.0 12.0		7.5 7.5	1000 1000		1000	1200 1200	1.0 1.0	1400 1400	160 160	PHE427MK5120JR05 PHE427MK5150JR05
				$\cdot \cup$						
			-40			SPACING 1				
9.0		10.0	1000		900		0.6	800	142	PHE427MA4150JR05
9.0	13.0	10.0	1000		900		0.6	800	142	PHE427MA4180JR05
9.0	13.0	10.0	1000		900		0.6	800	139	PHE427MA4220JR05
9.0		10.0	1000		900		0.6	800	139	PHE427MA4270JR05
9.0		10.0	1000		900		0.6	800	121	PHE427MA4330JR05
9.0	13.0	10.0	1000		900		0.6	800	116	PHE427MA4390JR05
9.0	13.0	10.0	1000		900		0.6	800	100	PHE427MA4470JR05
9.0		10.0	1000		900		0.6	800	100	PHE427MA4560JR05
9.0	13.0	10.0	1000		900		0.6	800	98	PHE427MA4680JR05
10.5	13.0	10.0	1000		800		0.9	800	86	PHE427MA4820JR05
10.5	13.0	10.0	1000		800		0.9	800	142	PHE427MA5100JR05
11.0	13.0	10.0	800		700		1.0	800	142	PHE427MA5120JR05
11.0		10.0	800		700		1.0	800	142	PHE427MA5150JR05
					LEAD:	SPACING 1	15 MM			
10.5	18.0	15.0	1000		600		1.5	1000	99	PHE427MB5100JR06
10.5		15.0	1000							PHE427MB5120JR06
										PHE427MB5150JR06
										PHE427MB5180JR06
										PHE427MB5220JR06
										PHE427MB5270JR06
										PHE427MB5330JR06
										PHE427MB5390JR06
1/5										PHE427MB5470JR06
14.5	10.0									PHE427MB5560JR06 PHE427MB5680JR06
	9.0 9.0 10.5 11.0 11.0 10.5 10.5 10.5 12.5 14.5 14.5	9.0 13.0 9.0 13.0 10.5 13.0 11.0 13.0 11.0 13.0 11.0 13.0 10.5 18.0 10.5 18.0 10.5 18.0 10.5 18.0 10.5 18.0 12.5 18.0 12.5 18.0 14.5 18.0	9.0 13.0 10.0 9.0 13.0 10.0 10.5 13.0 10.0 11.0 13.0 10.0 11.0 13.0 10.0 11.0 13.0 10.0 11.0 13.0 10.0 10.5 18.0 15.0 10.5 18.0 15.0 10.5 18.0 15.0 10.5 18.0 15.0 12.5 18.0 15.0 12.5 18.0 15.0 14.5 18.0 15.0 14.5 18.0 15.0 14.5 18.0 15.0 14.5 18.0 15.0 14.5 18.0 15.0	9.0 13.0 10.0 1000 9.0 13.0 10.0 1000 10.5 13.0 10.0 1000 10.5 13.0 10.0 1000 11.0 13.0 10.0 800 11.0 13.0 10.0 800 11.0 13.0 10.0 800 11.0 15.0 1000 10.5 18.0 15.0 1000 10.5 18.0 15.0 1000 10.5 18.0 15.0 1000 10.5 18.0 15.0 1000 12.5 18.0 15.0 1000 12.5 18.0 15.0 1000 12.5 18.0 15.0 1000 14.5 18.0 15.0 800 14.5 18.0 15.0 800 14.5 18.0 15.0 800	9.0 13.0 10.0 1000 9.0 13.0 10.0 1000 10.5 13.0 10.0 1000 10.5 13.0 10.0 1000 11.0 13.0 10.0 800 11.0 13.0 10.0 800 11.0 13.0 10.0 800  10.5 18.0 15.0 1000 10.5 18.0 15.0 1000 10.5 18.0 15.0 1000 10.5 18.0 15.0 1000 10.5 18.0 15.0 1000 12.5 18.0 15.0 1000 12.5 18.0 15.0 1000 12.5 18.0 15.0 1000 14.5 18.0 15.0 800 14.5 18.0 15.0 800 14.5 18.0 15.0 800	9.0 13.0 10.0 1000 900 9.0 13.0 10.0 1000 900 10.5 13.0 10.0 1000 800 10.5 13.0 10.0 1000 800 11.0 13.0 10.0 800 700 11.0 13.0 10.0 800 700  LEAD:  10.5 18.0 15.0 1000 600 10.5 18.0 15.0 1000 600 10.5 18.0 15.0 1000 600 10.5 18.0 15.0 1000 600 10.5 18.0 15.0 1000 600 10.5 18.0 15.0 1000 600 12.5 18.0 15.0 1000 600 12.5 18.0 15.0 1000 600 12.5 18.0 15.0 1000 600 14.5 18.0 15.0 800 400 14.5 18.0 15.0 800 400	9.0 13.0 10.0 1000 900  9.0 13.0 10.0 1000 900  10.5 13.0 10.0 1000 800  10.5 13.0 10.0 1000 800  11.0 13.0 10.0 800 700  11.0 13.0 10.0 800 700  LEAD SPACING  10.5 18.0 15.0 1000 600  10.5 18.0 15.0 1000 600  10.5 18.0 15.0 1000 600  10.5 18.0 15.0 1000 600  10.5 18.0 15.0 1000 600  12.5 18.0 15.0 1000 600  12.5 18.0 15.0 1000 600  12.5 18.0 15.0 1000 600  14.5 18.0 15.0 800 400  14.5 18.0 15.0 800 400  14.5 18.0 15.0 800 400	9.0 13.0 10.0 1000 900 0.6  9.0 13.0 10.0 1000 900 0.6  10.5 13.0 10.0 1000 800 0.9  10.5 13.0 10.0 800 700 1.0  11.0 13.0 10.0 800 700 1.0  LEAD SPACING 15 MM  10.5 18.0 15.0 1000 600 1.5  10.5 18.0 15.0 1000 600 1.5  10.5 18.0 15.0 1000 600 1.5  10.5 18.0 15.0 1000 600 1.5  10.5 18.0 15.0 1000 600 1.5  10.5 18.0 15.0 1000 600 1.5  10.5 18.0 15.0 1000 600 1.5  10.5 18.0 15.0 1000 600 1.5  10.5 18.0 15.0 1000 600 1.5  10.5 18.0 15.0 1000 600 1.5  10.5 18.0 15.0 1000 600 1.5  12.5 18.0 15.0 1000 600 1.7  14.5 18.0 15.0 800 400 2.7  14.5 18.0 15.0 800 400 2.7  14.5 18.0 15.0 800 400 2.7	9.0 13.0 10.0 1000 900 0.6 800 9.0 13.0 10.0 1000 900 0.6 800 10.5 13.0 10.0 1000 800 0.9 800 10.5 13.0 10.0 1000 800 0.9 800 11.0 13.0 10.0 800 700 1.0 800 11.0 13.0 10.0 800 700 1.0 800 11.0 13.0 10.0 800 700 1.0 800 11.0 13.0 10.0 800 700 1.0 800 11.0 13.0 10.0 800 700 1.0 800 11.0 13.0 10.0 800 700 1.0 800 11.0 13.0 10.0 800 700 1.0 800 11.0 13.0 15.0 1000 600 1.5 1000 10.5 18.0 15.0 1000 600 1.5 1000 10.5 18.0 15.0 1000 600 1.5 1000 10.5 18.0 15.0 1000 600 1.5 1000 10.5 18.0 15.0 1000 600 1.5 1000 10.5 18.0 15.0 1000 600 1.7 1000 12.5 18.0 15.0 1000 600 1.7 1000 12.5 18.0 15.0 1000 600 1.7 1000 14.5 18.0 15.0 800 400 2.7 1000 14.5 18.0 15.0 800 400 2.7 1000 14.5 18.0 15.0 800 400 2.7 1000	9.0 13.0 10.0 1000 900 0.6 800 100  9.0 13.0 10.0 1000 900 0.6 800 98  10.5 13.0 10.0 1000 800 0.9 800 86  10.5 13.0 10.0 1000 800 0.9 800 142  11.0 13.0 10.0 800 700 1.0 800 142  11.0 13.0 10.0 800 700 1.0 800 142  11.0 13.0 10.0 800 700 1.0 800 142  11.0 13.0 10.0 800 700 1.0 800 99  10.5 18.0 15.0 1000 600 1.5 1000 99  10.5 18.0 15.0 1000 600 1.5 1000 98  10.5 18.0 15.0 1000 600 1.5 1000 98  10.5 18.0 15.0 1000 600 1.5 1000 98  10.5 18.0 15.0 1000 600 1.5 1000 98  10.5 18.0 15.0 1000 600 1.5 1000 98  10.5 18.0 15.0 1000 600 1.7 1000 98  12.5 18.0 15.0 1000 600 1.7 1000 85  12.5 18.0 15.0 1000 600 1.7 1000 85  12.5 18.0 15.0 800 400 2.7 1000 74  14.5 18.0 15.0 800 400 2.7 1000 74  14.5 18.0 15.0 800 400 2.7 1000 74

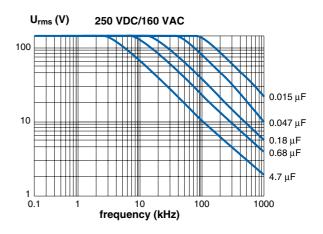


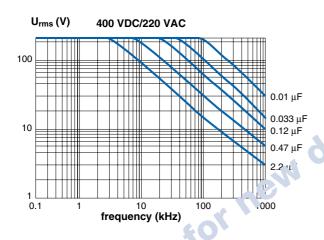
							ARTI	CLE TAB	LE			
Capaci- tance		dimen					package		Weight	Max dU/dt	Rthha °C/W 85 °C	Article code
μF	В	н	L	р	Bulk	Tray	Reel	Ammo	g	V/µs	0.2 m/s	
							630	VDC/300 \	/AC			
							LEAD S	PACING 22	2.5 MM			
0.047	6.5	14.5	26.0	22.5		234			3.2	600	58	PHE427MD5470JR06
0.056	6.5	14.5	26.0	22.5		234			3.2	600	58	PHE427MD5560JR06
0.068	6.5	14.5	26.0	22.5		234			3.2	600	58	PHE427MD5680JR06
0.082	7.0	16.5	26.0	22.5		216			3.9	600	53	PHE427MD5820JR06
0.10	7.0	16.5	26.0	22.5		216			3.9	600	52	PHE427MD6100JR06
0.12	9.0	18.5	26.0	22.5		168			5.6	600	48	PHE427MD6120JR06
0.15	9.0	18.5	26.0	22.5		168			5.6	600	46	PHE427MD6150JR06
	10.5	19.0	26.0	22.5		264			6.7	600	45	PHE427MD6180JR06
	11.0	21.5	26.0	22.5		253			8.0	600	41	PHE427MD6720JR06
0.22	11.0	21.5	20.0	22.3		233			0.0	000	41	F11E421WID02203H00
							LEAD S	PACING 2	7.5 MM			
0.15	10.5	20.5	31.5	27.5		216			8.0	300	37	PHE427MF6150JR06
0.18	10.5	20.5	31.5	27.5		216			8.0	300	37	PHE427MF6180JR06
0.22	10.5	20.5	31.5	27.5		216			8.0	300	37	PHE427MF6220JR06
0.27	11.5	22.5	31.5	27.5		198			10.6	300	35	PHE427MF6270JR06
0.33	11.5	22.5	31.5	27.5		198			10.6	300	34	PHE427MF6330JR06
	14.5	24.5	31.5	27.5		153			14.5	300	32	PHE427MF6390JR06
	14.5	24.5	31.5	27.5		153			14.5	300	31	PHE427MF6470JR06
	17.5	28.0	31.5	27.5		126			19.7	300	28	PHE427MF6560JR06
	17.5	28.0	31.5	27.5		126			19.7	300	27	PHE427MF6680JR06
0.00	17.5	20.0	31.3	21.5		120		C	15.7	300	21	F11E427 WII 00003H001
							LEAD S	PACING 3				
	13.0	24.0	41.0	37.5		140		0	16.6	250	27	PHE427MR6470JR06
0.56	13.0	24.0	41.0	37.5		140			16.6	250	27	PHE427MR6560JR06
	15.0	26.0	41.0	37.5		119			20.8	250	25	PHE427MR6680JR06
0.82	16.5	32.0	41.0	37.5		105			28.1	250	22	PHE427MR6820JR06
1.0	16.5	32.0	41.0	37.5		105			28.1	250	22	PHE427MR7100JR06
1.2	19.0	36.0	41.0	37.5	40	91			36.5	250	19	PHE427MR7120JR06
				*	10		1000	VDC/375	VAC			
				70,			LEAD	SPACING 7	.5 MM			
0.00068	4.0	8.0	10.0	7.5	1000		1700	1900	0.5	2000	160	PHE427PK3680JR05
0.00082	4.0	8.0	10.0	7.5	1000		1700	1900	0.5	2000	160	PHE427PK3820JR05
0.0010	4.0	8.0	10.0	7.5	1000		1700	1900	0.5	2000	160	PHE427PK4100JR05
0.0012	4.0	8.0	10.0	7.5	1000		1700	1900	0.5	2000	160	PHE427PK4120JR05
0.0015	4.0	8.0	10.0	7.5	1000		1700	1900	0.5	2000	160	PHE427PK4150JR05
0.0018	4.0	8.0	10.0	7.5	1000		1700	1900	0.5	2000	160	PHE427PK4180JR05
0.0022	4.0	8.0	10.0	7.5	1000		1700	1900	0.5	2000	160	PHE427PK4220JR05
0.0027	5.0	11.0	10.0	7.5	1000		1300	1500	0.8	2000	160	PHE427PK4270JR05
0.0027	5.0	11.0	10.0	7.5	1000		1300	1500	0.8	2000	160	PHE427PK4330JR05
0.0039	5.0	11.0	10.0	7.5	1000		1300	1500	0.8	2000	160	PHE427PK4390JR05
0.0047	5.0	11.0	10.0	7.5	1000		1300	1500	0.8	2000	160	PHE427PK4470JR05
0.0056	5.0	11.0	10.0	7.5	1000		1300	1500	0.8	2000	160	PHE427PK4560JR05
0.0068	6.0	12.0	10.5	7.5	1000		1000	1200	1.0	2000	160	PHE427PK4680JR05
0.0082	6.0	12.0	10.5	7.5	1000		1000	1200	1.0	2000	160	PHE427PK4820JR05
							LEAD S	PACING 1	0.0 MM			
0.0010	4.0	9.0	13.0	10.0	1000	1000		900	0.6	2000	160	PHE427PA4100JR05
0.0010	4.0	9.0	13.0	10.0	1000	1000		900	0.6	2000	160	PHE427PA4120JR05
									0.6			
0.0015	4.0	9.0	13.0	10.0	1000	1000		900		2000	160	PHE427PA4150JR05
0.0018	4.0	9.0	13.0	10.0	1000	1000		900	0.6	2000	160	PHE427PA4180JR05
0.0022	4.0	9.0	13.0	10.0	1000	1000		900	0.6	2000	160	PHE427PA4220JR05
0.0027	4.0	9.0	13.0	10.0	1000	1000		900	0.6	2000	160	PHE427PA4270JR05
	4.0	9.0	13.0	10.0	1000	1000		900	0.6	2000	160	PHE427PA4330JR05
0.0033 0.0039	4.0	9.0	13.0	10.0	1000	1000		900	0.6	2000	160	PHE427PA4390JR05

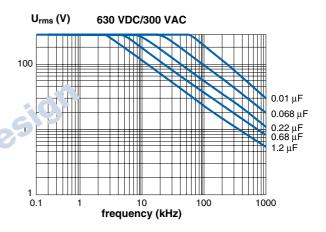


# DERATING OF $U_{\text{RMS}}$ VS FREQUENCY, +85°C AMBIENT TEMPERATURE AND 10°C INTERNAL HEATING, TYPICAL VALUES









More simulation possibilities in PCCADsoftware package. See page 204.

### **ORDERING INFORMATION**

The article code for the standard part is given in the article table. For other options, see page 21.

### **MARKING**

- RIFA
- Article code
- Rated capacitance according to IEC 60062
- Rated voltage
- Capacitance tolerance code
- Manufacturing code (year, month)

### **PACKING**

The box dimensions for bulk packaging are  $245 \times 145 \times 80$  mm. Quantity/package as in article table, based on standard lead length. Reels with taped capacitors are packed 10 in a box with the dimensions  $370 \times 370 \times 560$  mm. Quantity per reel as in article table. The standard quantity/reel is for 360 mm reel. If 500 mm reel is required, it must be specified when ordering and the quantity is  $2 \times 800$  the given quantity.

